

IN THE CLAIMS:

Kindly cancel claims 13-15 and amend claims 1-5, 8 and 10-12 as set forth below:

1. (Currently Amended) A method of dry treating a target surface prior to ~~packaging using~~ the target for subsequent use in a sputtering deposition process, comprising the steps of:

- a) preparing a target assembly and securing said target assembly in a vacuum chamber of a magnetron sputtering apparatus;
- b) energizing the magnetic component of the magnetron sputtering apparatus with a power between about 0.2 kW and about 4 kW for a period of time between about 4 and about 30 minutes to produce a surface dry treatment of a sputtering ion plasma on an exposed surface of the target to effectively reduce inherently undesirable impurities on the exposed surface;
- c) removing the treated target assembly from the magnetron sputtering apparatus; and
- d) preparing and packaging the target assembly for subsequent use in ~~a~~ the sputtering deposition process.

2. (Currently Amended) The method of claim 1 wherein the magnetron sputtering apparatus is rotatable and the magnetic component of the magnetron sputtering apparatus is disposed on less than a 180° arc measured at the axis of rotation of the apparatus so as to produce a rotatable sputtering ion plasma on the exposed surface of the target.

3. (Currently Amended) The method of claim 1 wherein the exposed target surface is treated for a time period between about 8 and about 10 minutes and a power of between about 0.2 kW and about 0.4 kW.

4. (Currently Amended) The method of claim 3 wherein the exposed target surface is treated in an inert atmosphere.

5. (Currently Amended) The method of claim 6 ~~4~~ wherein ~~an~~ the inert atmosphere is argon.

6. (Original) The method of claim 1 wherein after removing the target assembly from the magnetron sputtering apparatus in step c), at least the surface treated portion of the target assembly is placed in an enclosure to protect it during storage and shipment.

7. (Previously Presented) The method of claim 6 wherein the enclosure is metallic and the metallic enclosure containing the target assembly is further placed into a different enclosure.

8. (Currently Amended) The method of claim 1 wherein the target material is selected from the group consisting of titanium, aluminum, copper, molybdenum, cobalt, chromium, ruthenium, rhodium, palladium, silver, osmium, iridium, platinum, gold, tungsten, silicon, tantalum, vanadium, nickel, iron, manganese, germanium, or alloys thereof.

9. (Original) The method of claim 2 wherein the magnetic component is FeNdB.

10. (Currently Amended) ~~The method of claim 2 wherein the following step is added: d) assembling the treated target assembly into a sputtering apparatus to coat the substrate and then sputtering the target and the burn-in time required is reduced by at least 10% using the treated target of step b) compared to an untreated target.~~

A method of dry treating a target surface prior to initial use of the target in a sputtering deposition process, the method comprising the steps of:

a) preparing a target assembly and securing said target assembly in a vacuum chamber of a magnetron sputtering apparatus;

- b) energizing the magnetic component of the magnetron sputtering apparatus with a power between about 0.2 kW and about 4 kW for a period of time between about 4 and about 30 minutes to produce a surface dry treatment of a sputtering ion plasma on an exposed surface of the target to effectively reduce inherently undesirable impurities on the exposed surface;
- c) removing the treated target assembly from the magnetron sputtering apparatus;
- d) packaging the target assembly for subsequent use in a the sputtering deposition process;
- e) assembling the target assembly into a sputtering apparatus to coat a substrate; and
- f) sputtering the target assembly to burn-in the target assembly wherein the burn-in time is reduced by at least 10% compared to an untreated target.

11. (Currently Amended) The method of claim 10 wherein the exposed target surface is treated for a time period between about 8 and about 10 minutes and a power of between about 0.2 kW and about 0.4 kW.

12. (Currently Amended) The method of claim 11 wherein the target material is selected from the group consisting of titanium, aluminum, copper, molybdenum, cobalt, chromium, ruthenium, rhodium, palladium, silver, osmium, iridium, platinum, gold, tungsten, silicon, tantalum, vanadium, nickel, iron, manganese, germanium, or alloys thereof.

Claims 13-20 (Cancelled).